

```

/* Function to multiply a 3 x 5 array by a scalar    */

#include <stdio.h>
#include "user.h"

void scalar_multiply ();

main ()
{
    static int sample_matrix[3][5] =
        {
            { 7, 16, 55, 13, 12 },
            { 12, 10, 52, 0, 7 },
            { -2, 1, 2, 4, 9 }
        };
    printf ("Original matrix: \n");
    display_matrix (sample_matrix);

    scalar_multiply (sample_matrix, 2);

    printf ("\nMultiplied by 2: \n");
    display_matrix (sample_matrix);

    scalar_multiply (sample_matrix, -1);

    printf ("\nThen multiplied by -1: \n");
    display_matrix (sample_matrix);
}

void scalar_multiply (matrix, scalar)
int  matrix[3][5];
int  scalar;
{
    int  row, column;

    for ( row = 0; row < 3; ++row )
        for ( column = 0; column < 5; ++column )
            matrix[row][column] *= scalar;
}

```